

IPO-P1755

SUBSTITUTE SPECIFICATION  
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[0001] IMAGE PICKUP SYSTEM

[0002] CROSS REFERENCE TO RELATED APPLICATION(S)

[0003] This application claims benefits of Japanese Application No. 2002-242400 filed in Japan on Aug. 22, 2002, the contents of which are incorporated by this reference.

[0004] BACKGROUND OF THE INVENTION

[0005] 1. Field of the Invention

[0006] The present invention relates to an image pickup system and image processing program which reduce random noise arising in the image pickup element system.

[0007] 2. Description of the Related Art

[0008] Generally, noise components are contained in digitized signals obtained from image pickup elements and the associated analog circuits and A/D converters. Such noise components can be divided into two main categories, i.e., fixed pattern noise and random noise.

[0009] The abovementioned fixed pattern noise, as typified by defective pixels or the like, is noise that originates mainly in the image pickup elements.

[0010] On the other hand, random noise is generated in the image pickup elements and analog circuits, and has characteristics that are close to white noise characteristics.

[0011] In regard to the latter random noise, for example, a technique in which the amount of noise  $N$  is converted into a function by  $N = ab^{cD}$  using constant terms  $a$ ,  $b$  and  $c$  that are given as static terms, and the signal level  $D$  converted into a density value, the amount of noise  $N$  for the signal level  $D$  is estimated from this function, and